

Hi Ken:

As mentioned before, I am sending you a few NJDEP's additional comments related to the SRFI report, the newly promulgated NJ soil clean-up standards (which you already have the answer for the CMS purpose), and issues related to vapor intrusion. As you know, the CMS related reports were proceeded on somewhat an accelerated basis, these pre-CMS issues now needs to be addressed either sequentially or, preferably, concurrently with the CMS reviews. Let's play by ear.

Sin-Kie

The NJDEP's comments on the SRFI report

Page 137, 6.5 Comment 5, RFI Sections 2.3 and 6.1.36: The proposal to conduct further ecological evaluation as a separate task is acceptable; pursuant to N.J.A.C.7:26E- 3.11(a)4, a full Ecological Risk Assessment conducted in accordance with N.J.A.C.7:26E-4.7 is required. With regard to SAIC's comments about other contaminant sources, they are advised that "joint, several and strict liability" applies to the Chevron site.

Page 346, 6.148 Comment 148, RFI Section 9.3: This response is acceptable in that it states that frequency of detection was not used alone to cull contaminants of potential ecological concern (COPECs), and that culled contaminants will be re-examined and reinstated if warranted. The results of the re-evaluation will be included in a "Supplemental Ecological Evaluation Report." However, the NJDEP remains concerned. Using Copper as the example, the response states it is absent in groundwater, was detected above the soil criterion with low frequency, and the migration pathways do not exist from onsite soils to sediments. In addition to the NJDEP's original comment regarding Copper hot spots in the Woodbridge Creek, the NJDEP remains concerned that Copper was not analyzed for in recent ground water samples (i.e., the groundwater monitoring well data reported in Table 39, "Deep Well Pairs" did not include Copper data), the soil Copper criterion referred to is the human health-based Soil Clean-up Criterion (SCC), which is higher than soil and sediment ecological criterion and in inappropriate point of comparison, and surface runoff is a likely historic contaminant migration pathway, when the many decades of site operations and topographic gradient towards the creeks are considered. Also, direct disposal of waste in waterbodies adjacent to legacy industrial sites was not an uncommon practice and must be considered unless otherwise documented. TPH, in addition to the full PAH suite and metals, must be retained as a contaminant of concern. Again, "joint, several and strict liability" is applicable. The proposed COPEC re-evaluation must take these concerns into consideration. A determination will have to be made regarding Copper in the future.

Page 353, 6.153 Comment 153, RFI Section 9.5.4: The NJDEP is unclear regarding inclusion of Spa Spring Creek and the NFE in further ecological evaluations. Chevron should be aware that pursuant to N.J.A.C.7:26E-3.11(a)1, Spa Spring Creek must be addressed.

NJDEP Soil Remediation Standards

On June 2, 2008, the Department adopted new Remediation Standards rules at N.J.A.C. 7:26D. Also on June 2, 2008, the Department concurrently amended the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-1.3(d). N.J.A.C. 7:26E-1.3(d) was amended to reference the new remediation standards rules and require that site-specific impact to ground water standards be developed pursuant to the Brownfield Act.

N.J.A.C. 7:26E-1.3(d)1 establishes that the person responsible for conducting the remediation must remediate a site:

To the remediation standards at N.J.A.C. 7:26D and the impact to ground water soil remediation standards developed on a site-by-site basis pursuant to N.J.S.A. 58:10B-12a; or to the Soil Cleanup Criteria (SCC) that were in effect prior to June 2, 2008 when:

1. The remediating party has submitted a remedial action workplan or a remedial action report before December 2, 2008 that establish the SCCs as the standards for the site;
2. The remedial action workplan or a remedial action report is in compliance with the Technical Rules, N.J.A.C. 7:26E-6; and
3. The SCC for the site are not greater by an order of magnitude or more, than the soil remediation standards adopted by N.J.A.C. 7:26D.

The Soil Cleanup Criteria (SCC) that were in effect prior to June 2, 2008 are provided at <http://www.nj.gov/dep/srp/guidance/scc/>.

The remedial action workplan (RAWP) or a remedial action report (RAR) will be considered in compliance with the Technical Rules, N.J.A.C. 7:26E-6 when the Department has reviewed the report and has:

- Approved the RAWP or RAR; or
- Issued a Notice of Deficiency (NOD) and the remediating party rectifies all deficiencies to the Department's satisfaction within the timeframe specified by the Department; and
- The remedial action is conducted within the timeframe specified in the RAWP.

A remedial action workplan (RAWP) or a remedial action report (RAR) will not be considered in compliance with the Technical Rules, N.J.A.C. 7:26E-6 when the Department has reviewed the report and has issued a Notice of Violation (NOV) to the remediating party. Under this situation, the remediating party must remediate the site to the remediation standards at N.J.A.C. 7:26D and the impact to ground water soil remediation standards developed on a site-by-site basis pursuant to N.J.S.A. 58:10B-12a.

Determination of the appropriate soil standards for the Chevron Perth Amboy site must be resolved before the NJDEP can ascertain whether soil contaminant delineation has been properly completed. Thus, this memorandum does not address the assertion made by Chevron as it relates to contaminant delineation at the site.

Comment 38

NJDEP Comment: Chevron shall evaluate the vapor intrusion pathway within the site. The assessment shall be consistent with the USEPA's Draft Guidance for Evaluating the Vapor Intrusion to indoor Air Pathway for Groundwater and Soils (November 2002). This provision is required for all RCRA sites in order to determine whether the vapor intrusion pathway is complete. It should be noted that Chevron shall evaluate both current and future use scenarios in determining whether the pathway is complete.

If a determination is made that the pathway is complete, a supplemental workplan shall be prepared to properly investigate the potential migration of subsurface vapors from contaminated ground water and/or soils.

Chevron's Response: Based on their analysis of subsurface contamination, a potential vapor intrusion pathway does not exist. The site is an active petroleum facility and is anticipated to remain industrial. No further analysis is recommended.

NJDEP Response: In October 2005, the NJDEP issued new guidance on the investigation and mitigation of the vapor intrusion pathway. This document, NJDEP's Vapor Intrusion Guidance, shall be utilized by Chevron in all future assessments.

Based on the current operations, the NJDEP accepts Chevron's position that vapor intrusion is not an issue for workers at the site. However, the analysis fails to properly address future use at the site.

Chevron insists that the property will remain industrial. Yet, two large parcels of the site have been sold and developed in the last 5 years as part of the municipality's redevelopment plan.

The SRFI Report notes the presence of groundwater contamination in excess of the NJDEP Groundwater Screening Levels for vapor intrusion. In addition, LNAPL has been detected in numerous locations across the site. The potential for vapor intrusion occurring under a future use scenario exists. Chevron shall address this issue.

Recommendations, Section 7.2

The SRFI Report recommends many SWMU, SWMA and AOCs be addressed under Chevron's CMS and 22 units of NFA based on the completed delineation of the soils contamination.

As previously noted, the delineation of soil contamination is unclear at this time due to the issuance of the NJDEP Soil Remediation Standards. Until this issue is resolved, the NJDEP has reserved judgment on the adequacy of the soil samples to properly delineate the contamination.

The dissolved ground water contamination is delineated both horizontally and vertically except for the area of AOC 31 (MW-250) where additional investigation is proposed.

Page 132: Chevron fails to mention that ammonia is present in the deep aquifer in wells SB-10 and MW-184 above the GWQS. These areas need to be horizontally and vertically delineated (N.J.A.C. 7:26E-4.1(a)1).

Page 332, Chevron continues to request a NFA for ground water for SWMU 41. Chevron should be aware that a NFA can not be granted if there is mostly residual LNAPL present.

In general NFAs are not granted for individual AOCs or SWMUs for ground water. A ground water NFA is given for the site as a whole. In Chevron's situation there is free product present on site and dissolved contaminant levels above the Ground Water Quality Standards. A NFA for ground water can not be issued for individual AOCs or SWMUs but the NJDEP may agree that there are no further ground water issues.

Page 360, Table 77: NFAs are requested for a number of units for ground water. As stated above, a NFA is issued for ground water for the site as a whole. The NJDEP could review the unit specifics and determine if there are any further ground water issues. To make this process easier Chevron should submit a document, which summarizes the history of the SWMU or AOC in question, in terms of historical use, ground water and soil sampling results and any remedial activities conducted. Based on this summary, the NJDEP can then determine if there are any further ground water issues.

